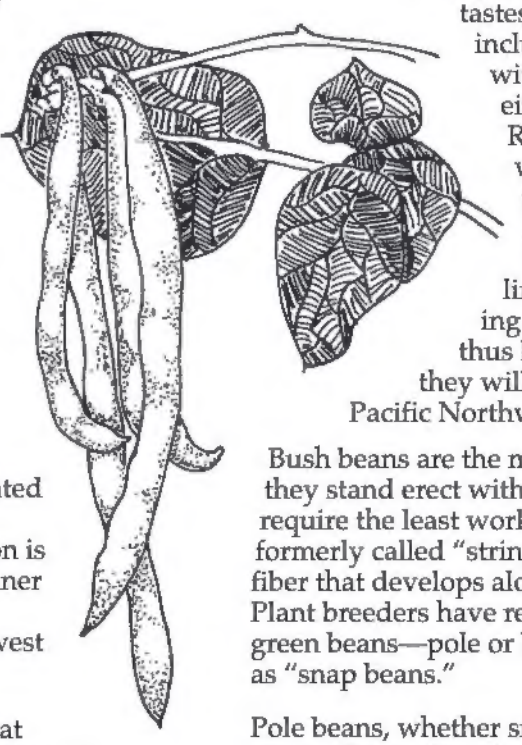
Beans and Peas

James R. Myers, W. Michael Colt, and Marilyn A. Swanson

Pea planting signals the start of the springtime garden. Plant sweet garden peas, crunchy snaps, and succulent snow peas as soon as your garden's soil has dried enough to be worked. In a month or so your garden will welcome plantings of easy-to-grow snap, Romano, and lima beans.

Beans

Common beans originated in South and Central America and were widely used by Indians throughout North and South America. Today, the most popular types with home gardeners are snap beans, romano or Italian beans, and lima beans. Each of these types divides further into two kinds: low growing (bush beans) and tall growing (pole or runner beans). Another closely related member of the New World bean family grown for fresh consumption is the scarlet runner bean. Scarlet runner beans prefer mild, moist growing conditions similar to those found west of the Cascades.



Other legume-family vegetables that have beanlike seeds include fava or broad beans, southern peas (blackeye cowpeas), asparagus or yard-long beans, and soybeans, all of which originated in the Old World. While the fava bean requires climatic conditions similar to those of English, or garden, peas, other Old World beans require warmer nights and a longer growing season than is typically found in the Pacific Northwest. Certain varieties of soybean are harvested green or immature and are used in Oriental dishes or as a snack food. These are called vegetable soybeans.

Many varieties of beans are available to suit a variety of individual needs and tastes. Snap bean varieties include the pole or bush types with green or wax pods and either colored or white seeds. Romanos are flat-podded with a stronger bean flavor than the snaps. Limas can be either the baby lima or the large-seeded lima. Most limas require a longer growing season than other beans, thus limiting the areas where they will grow successfully in the Pacific Northwest.

Bush beans are the most popular type because they stand erect without support, yield well, and require the least work. Green bush beans were formerly called "string beans" because of the fiber that develops along the sutures of the pods. Plant breeders have reduced these fibers, and green beans—pole or bush—are now referred to as "snap beans."

Pole beans, whether snap or lima, will not interweave themselves through horizontal wires, and thus vertical supports must be provided. Many gardeners prefer pole beans because they usually bear over a longer period than the bush type and yield more in the same space.

Generally, varieties of snap beans that have a maturity date of 55 to 70 days are well suited to Pacific Northwest weather conditions. In the

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higher elevations of the Pacific Northwest, plants may require an additional 15 to 20 days beyond the maturity date printed on the package.

Plant characteristics, as well as general cultural requirements, are outlined on the seed packets. This information will help you choose the variety that best suits your needs.

Peas

English peas, or garden peas, are the most widely grown peas in Pacific Northwest gardens with many smooth- or wrinkled-seeded varieties available. Wrinkled-seeded varieties tend to be sweeter than smooth-seeded varieties. The smooth Alaska types are generally earlier maturing.

Snow peas or Oriental pod peas can be eaten without shelling. They can be eaten raw or lightly cooked in stir-fry dishes.

The snap pea types combine the best of both worlds. Like snow peas, they have edible pods, and like garden peas, you can let them grow until their seeds fill the pods. Snap pea pods are thick and fleshy like those of their counterpart, the snap bean. The pods stay crisp and succulent until the peas have completely developed.

The first snap pea varieties had strings along pod sutures, but newer varieties are stringless. Varieties without strings are more sensitive to environmental stress than the stringy varieties because the stringless trait reduces fiber throughout the plant. Lower germination, smaller pods with fewer seeds, and lower yields may occur under less than optimal growing conditions. Low temperatures during pod development may cause strings to form in stringless types.

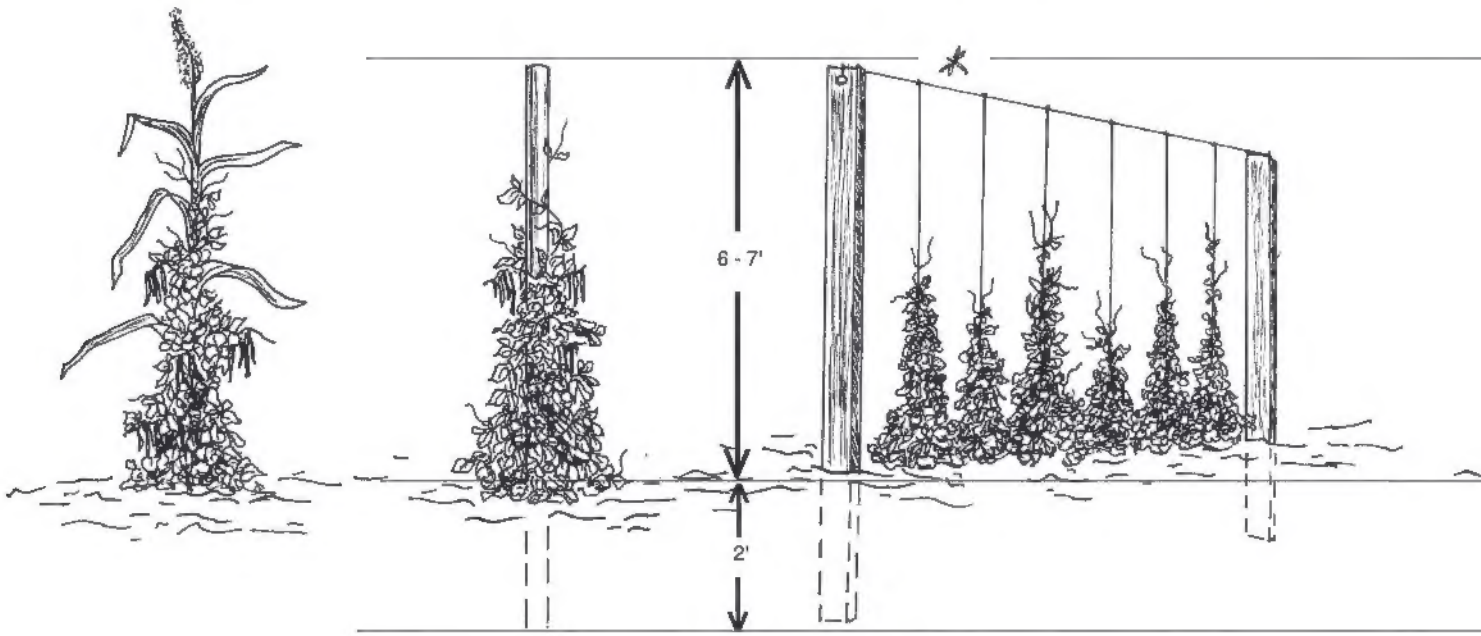
The afila pea varieties have tendrils replacing the leaflets found on normal pea plants. Afila types grown in blocks are self-trellising. Pods are easier to see and pick and have more uniform color. The new afila varieties yield generally the same as standard types.

Growing requirements

Seedbed

Peas and beans will grow successfully in most Pacific Northwest soils except those that are extremely acidic or alkaline. Optimal soil pH ranges from 6.0 to 7.0. Beans do best on sandy and loamy soils, whereas peas will tolerate light sand to heavy clay soils.

Do not cultivate wet soils. Cultivation should mix crop residues and organic matter in the top



Pole bean supports
Support pole beans with 6-foot-tall metal, wood, or bamboo stakes or even with live corn stalks.

Pole beans can also grow up a trellis made from sticks, bamboo canes, or reusable nylon netting. One simple trellis consists of two sturdy end posts with a strong wire across the top from which strings hang at 24-inch intervals.

7 to 8 inches of soil, destroy current weed growth, and provide a granular bed for seeding. Overcultivation may lead to soil compaction, which restricts root growth, and to crusting, which restricts seedling emergence. Peas and beans are sensitive to soil compaction and crusting.

Planting

Beans can be safely planted one to two weeks before the average date of the last killing frost in the spring. Choose an earlier planting date if you plan to provide frost protection, but best results are obtained when soil temperature is consistently higher than 60°F (16°C). Varieties with colored seeds will germinate and emerge better in cold, wet soils compared with white-seeded varieties.

Plant bush beans 1 to 1 $^{1}/_{2}$ inches deep at a rate of four to eight seeds per foot in rows spaced 2 to 3 feet apart. Pole-type beans should be planted in wider rows or in hills with three to five plants per hill. A teepee of 6- to 8-foot-long poles erected over the hill provides support for the vines. If you plant pole beans in rows, you can use a fence as a trellis or an overhead wire from which you hang vertical strings.

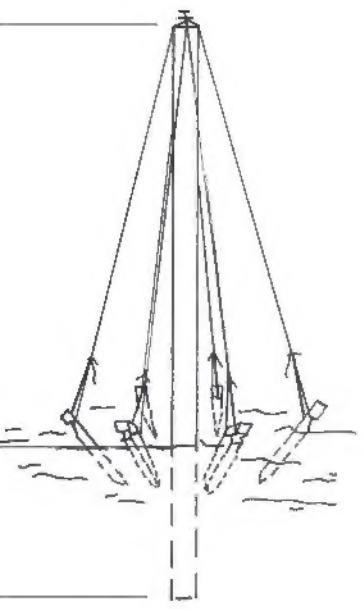
Peas are a cool climate crop that can be planted as soon as the ground can be worked in the spring, about six to eight weeks before the last killing frost. Soil temperature for planting should be 50°F or higher. Successive plantings at 10-day intervals spread harvest over a longer period of time.

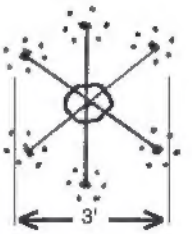
Plant peas 1 to 1 $^{1}/_{2}$ inches deep. Peas are sometimes planted in pairs of rows 6 to 8 inches apart with the pairs on 3-foot centers. Peas may sometimes be supported by short stakes or trellises.

Beans and peas need warm soil to grow and good spacing for adequate sunlight. It is better to irrigate the soil several days before planting rather than to irrigate right after planting. Seed should *not* be soaked before planting. The sudden influx of water causes cracking and could result in poor germination and diseased, weakened plants. Gardeners who wish to insure rapid growth from seedling time can place a plastic mulch, either black or clear, on the soil two to four weeks before planting to speed the soil's warming.

Fertilizer

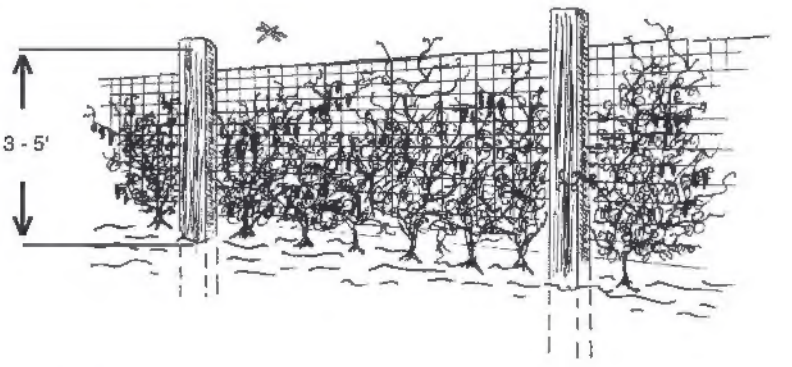
Beans and peas are legumes and can produce some of their own nitrogen. To supplement this at planting, add a 10 percent nitrogen fertilizer,





Another pole bean support is a "maypole" or teepee. Plant six seeds around each peg, thinning to three plants after they are established.

Pea brush
Stick dead branches from trees or shrubs into the soil to form a natural, continuous trellis for peas.



Pea fence
Peas will climb a fence made from 4-inch-mesh wire. Most varieties will do fine on a 3-foot-tall fence. Tall-growing varieties, such as Sugar Snap, need a fence 5 feet tall.

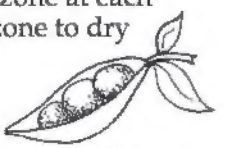
using 1 pound of fertilizer for every 100 square feet for peas and 2 pounds for every 100 square feet for beans. Excessive nitrogen can cause pea plants to produce large vines but fewer peas.

On most alkaline soils in the Pacific Northwest, potassium is adequate, but phosphorus needs supplementation. Using an 11-48-0 or similar analysis fertilizer as the nitrogen source will also provide adequate phosphorus.

Cultural practices

Weed control, water management, and rotation of planting site from year to year are important cultural practices. Use shallow cultivation for weed control. Deep cultivation close to the plants will damage the root systems and reduce yield and quality. Mulching will help prevent weed growth and conserve moisture.

Beans and peas grow poorly in wet or water-soaked soils. Pea and bean plant root depths average 2 feet. Apply 1 or 2 inches of water at weekly intervals, filling the root zone at each watering and allowing the root zone to dry partially between waterings.



Diseases

The following pea diseases may be a problem: seed rot, damping-off, fusarium wilts, basal stem rot, powdery mildew, downy mildew, root rots, and bean leaf roll. Bean diseases include seed rot, damping-off, seedling blight, root rot, sclerotinia (white mold), curly top, bean common mosaic, and bean yellow mosaic. To control fungal and soilborne bacterial diseases, rotate your planting site. Resistant varieties are the best defense against the viral diseases. Look for varieties described as resistant to bean common mosaic.

Insects

The following insects may hurt your pea crop: loopers, cutworms, armyworms, grasshoppers, pea aphids, pea leaf weevil, pea moth, pea weevil, and wireworms. On beans, look for these: lygus bugs, nitidulids beetles, aphids (including the bean aphid), armyworms and cutworms, grasshoppers, pea leaf weevil, seed corn maggot, gray garden slug, spider mites, cucumber beetles, beet leafhopper, and wireworms. For information on insect control, contact the extension office in your county.

Harvest and handling

Harvest garden peas, snap peas, and lima beans when pods are plump but before seeds harden or pods yellow. Pick snow pea pods while they are tender and when peas are just beginning to form in the pod. Harvest snap beans when pods are full size, but before seeds cause pod bulging.

Harvesting every three to four days will prevent overmaturity and stimulate the plants to continue to produce new pods. Preserve pea and bean nutrient quality by cooling as soon as possible after harvest.

Both peas and beans are easily canned, dried, or frozen. To freeze garden peas, harvest when pods are filled with young, tender peas that have not become starchy. Wash, shell, and wash again. Blanch peas two minutes. Chill rapidly in an ice water bath, drain well, and freeze immediately.

To freeze snap peas, select firm, unblemished pods. If necessary, remove strings. Wash, and blanch for two minutes. Chill rapidly in an ice water bath, drain well, and freeze immediately.

Both lima beans and snap beans will freeze easily. For lima beans, harvest while the seed is in the green stage. Wash in cold water, shell, wash again, and sort according to size. Blanch small beans one minute, medium beans two minutes, and large beans three minutes. Cool rapidly in an ice water bath. Drain well, and freeze immediately.

To freeze snap beans, select young tender pods when the seed is first formed. Wash, and trim ends. Cut into 2- to 4-inch lengths. Blanch three minutes. Cool rapidly in an ice water bath. Drain, and freeze immediately.

About the authors—James R. Myers, plant breeder and geneticist, UI Kimberly Research and Extension Center, Department of Plant, Soil, and Entomological Sciences; W. Michael Colt, extension horticulturist, UI Parma Research and Extension Center, Department of Plant, Soil, and Entomological Sciences; and Marilyn A. Swanson, extension food safety specialist, School of Family and Consumer Sciences, Moscow.

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